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ABSTRACT

Research on the role of age in second language (L2) learning, particularly at the level of primary education, is reviewed and discussed. It is concluded that evidence suggests early L2 exposure increases chances of ultimately attaining a high proficiency level in that language, but that in formal educational situations any long-term advantage will be slow to manifest itself and may not do so at all unless articulation between primary and secondary programs is properly managed. Some L2 learners may attain native-like L2 proficiency without an early start. These findings do not resolve the question of whether primary school L2 instruction is good, but do imply some questions for curriculum planners, including: what proficiency level should be required or useful to learners in the long term; what the chances are of ensuring that input at every stage of learning is appropriately focused, abundant, and enhanced; and what degree of coordination is possible between primary-level and secondary-level language programs? Decisions made about primary school language learning must be made with the same planning and foresight and on the basis of broadly the same preoccupations as other aspects of language in the curriculum. Contains 36 references. (MSE)

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Second Languages in the Primary School: The Age Factor Dimension

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ABSTRACT

This article considers the issue of primary-level L2 programmes from the perspective of evidence of an age factor in L2 learning. It begins by examining the "catch-up conundrum" - the apparent paradox of older beginners catching up with older beginners in formal instructional settings and younger beginners catching up woth older beginners in naturalistic settings. This conundrum is addressed via a modified version of Krashen, Long and Scarcella's notion of an initial advantage for older L2 learners and a long-term superiority for younger learners. The article goes on to note that available L2 evidence does not support an absolutist version of the Critical Period Hypothesis and that some learners attain native-like L2 proficiency without the benefit of childhood exposure to the language concerned. Finally, some general remarks are offered, based on earlier discussion, in respect of questions that need to be asked when the matter of L2s in the primary school is being considered.

INTRODUCTORY REMARKS

Primary-level L2 programmes have come up for discussion in various recent publications emanating from Irish authors (e.g., Breathnach 1993; Harris 1992; McCarthy 1994). Nor, quite clearly, is interest in this topic purely local (see, e.g., C.M.I.E.B./C.L.A./Ville de Besançon 1992; Johnstone 1991; Pincemin and O'Neil 1990; Titone 1986; Vilke and Vrhovac 1993). Probably the major point of debate in this connection has been the question of the age factor in L2 acquisition. There are, of

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course, many other factors that need to be considered when one is making decisions about languages in the primary school (cf. Singleton 1989: Chapter 6; Singleton 1992, and see below), but, for entirely understandable reasons, the age question is the one that looms largest. It is, moreover, an issue on which divergent views continue to be expressed - all claiming to be based on the available evidence. It therefore seems worthwhile to attempt to make sense of such evidence.

THE CATCH-UP CONUNDRUM

A highly influential contribution to the debate was the evaluation by Burstall, Jamieson, Cohen and Hargreaves (1974) of a project that introduced French into selected primary schools in England and Wales for pupils from the age of eight. The evaluation covered the period 1964-74, monitoring 17,000 pupils in all. Burstall *et al.* interpreted their results as showing a progressive diminution of any advantage conferred by early exposure to French. They cited comparisons between the experimental sample (i.e., pupils included in the scheme) and control groups of pupils who had begun learning French at age 11, the latter being drawn from the same secondary schools and most frequently from the same classes as the former. When experimental and control groups were compared at age 13, the former scored significantly higher on aural and oral tests, but the control pupils' performance in reading and writing equalled or surpassed that of the experimental pupils. When experimental and control pupils were compared at age 16, the only test on which the former's scores were still significantly ahead was the listening test. Given the three-year start of the experimental pupils, this looks very much like evidence of the superiority of the older learner. More direct evidence still comes from another comparison in the study; when experimental pupils were compared at age 13 with control pupils who had been learning French for an equivalent amount of time but who were, on average, two years older than those in the experimental sample; the control pupils' performance on each of the French tests was found to be consistently superior to that of the experimental pupils.

Also published in 1974 was Oller and Nagato's oft-quoted study. The 233 pupils for this piece of research were drawn from seventh, ninth and eleventh grades of a private Japanese elementary and secondary school

system, and at each grade level included some pupils who had received early instruction in English and some pupils who had not. Subjects' proficiency in English was gauged by means of cloze tests, a different test being deployed for each grade.. The results showed a highly significant difference in favour of the early beginners at the seventh-grade level, but a progressive reduction in this difference in the later grades, to the point where at eleventh-grade level it was no longer significant.

Subsequent studies conducted in other countries (e.g., Stankowski Gratton 1980; Morris and Gerstman 1986) yielded similar findings. It would be inappropriate here to multiply references, but, it is a clear general conclusion of evaluations of primary-level L2 programmes that within a few years of early beginners joining the classes of the later beginners at secondary level the latter have all but caught up with the former in terms of L2 performance (see, e.g., Harley 1986; Singleton 1989).

The findings of studies involving subjects who have learned an L2 "naturalistically", however, yield a converse pattern. Subjects with several years' naturalistic experience of their L2 whose exposure to the L2 began early in childhood are found to tend to outperform those whose exposure began later. On the other hand, naturalistic studies of subjects with more limited experience of their L2 show older beginners outperforming younger ones. In short, it seems that in naturalistic contexts the tendency is for younger beginners to catch up with older beginners.

Typical of investigations involving subjects with long exposure to the L2 is Oyama's work with 60 Italian-born immigrants to the United States who had arrived in America at ages ranging from six to sixty years and whose length of residence there ranged from five to eighteen years. Oyama tested her subjects' English pronunciation and listening comprehension. In the former experiment (Oyama 1976) subjects read aloud a passage in English and also recounted in English a frightening episode from their life. Audio-tapes were compiled comprising extracts of subjects' productions interspersed at irregular intervals with extracts of speech produced by native speakers, all extracts then being rated by

native speaker judges. The results revealed the following: the youngest arrivals performed in the range set by the native-speakers; those who had arrived around or after age 12 did not; and substantial accents began to appear much earlier. In the listening comprehension experiment (Oyama 1978), English sentences recorded by a native speaker were played to subjects against a background of "white noise", their instructions being to repeat what they understood. A clear age at arrival effect again emerged, subjects who had begun to be exposed to English before age 11 showing scores similar to those of native speakers, later arrivals doing less well, and those who had arrived after age 16 showing markedly lower scores than the natives.

Also worth mentioning is a recent study by Hyltenstam (1992) focusing on the long-term L2 attainment of immigrants in Sweden who had arrived at various stages during their childhood and whose period of residence in the country exceeded three years. Swedish data, both oral and written, were elicited from these subjects and from a control group of Swedish native speakers. Analysis of these data revealed that the numbers of errors produced by subjects who had arrived in Sweden after age seven were consistently in a higher range than that of the native speakers, whereas the range of numbers of errors produced by earlier arrivals overlapped with those of both the other groups.

Among studies involving subjects with shorter-term exposure to an L2 in an L2 environment, a representative example is Ervin-Tripp's (1974) investigation of 31 English-speaking children ranging in age from four to nine years who had been naturalistically exposed to French in Switzerland for up to nine months. The data in this case came mostly from tests of comprehension of syntax and morphology, imitation tasks, English-French translations, diary records and free conversation. The pattern which emerged from the results was that of the older children outperforming the younger ones across the board.

Again, this is not the place for a comprehensive review of the pertinent studies. Such a review would simply confirm the above-outlined pattern (see, e.g., Harley 1986; Long 1990; Singleton 1989). Indeed, research conducted by Snow and Hoefnagel-Höhle (1978) seems to provide *direct* evidence of younger naturalistic learners catching up with older learners. This study looked at beginning learners of Dutch newly

resident in the Netherlands and ranging from young children to mature adults. When these beginners were tested in Dutch shortly after arriving in Holland, it was found that the adults and adolescents were well ahead of the children. Further testing over the following months, though, showed the older learners' advantage gradually diminishing, so that within a year or so the younger learners' scores were in most respects as high as the older learners' and in some respects higher.

This, then, is the paradoxical state of the evidence. In conditions of natural exposure older learners initially evince a faster rate of progress than those whose L2 experience begins in early childhood, but these latter eventually catch up with and outstrip the former. In formal situations, on the other hand, secondary-school learners without benefit of L2 instruction at primary school eventually catch up during the secondary cycle with learners who have had primary-level L2 instruction. A superficial reading of these findings might conclude that formal conditions interact with maturational factors differently from natural exposure conditions. Before rushing to such a conclusion, however, it would be well to consider other possibilities.

First, there is a methodological consideration. As Stern observes in his (1976) critique of the Burstall *et al.* study, the fact that in such studies experimental and control groups are integrated at secondary level is likely to make for a blurring effect. Any teacher knows that if pupils who already have some experience of a given school subject are mixed with beginners and subjected to instruction which merely takes them over ground they have already covered, the result is boredom and demotivation - hardly ideal conditions for learning. In any case, if learners are not being given new material to work on, how can their knowledge do other than stagnate? Furthermore, pupils who, because of previous tuition, are markedly more proficient in a given domain than their peers quickly learn to hide the fact, in order to silence sarcastic comment; obviously, such pressure to conceal knowledge from others will hardly favour its development or even its retention. Given all of this, more than a modicum of scepticism is warranted with regard to claims based on studies like Burstall *et al.'s*.

Second, there is the exposure-time issue. Clearly, any period of experience of an L2 in an L2 environment delivers more exposure to the L2 than an equivalent period of formal second-language instruction. Accordingly, if the amount-of-exposure variable is held constant, the notions of "initial advantage" and "eventual effects" become associable in formal contexts with considerably longer real-time periods than in naturalistic situations. Specifically, it has been calculated (Singleton 1989: 236) that more than 18 years would need to be spent in formal L2 classes in order to obtain the same amount of L2 input as seems (according to the Snow and Hoefnagel-Höhle studies) to be required for older learners' initial advantage to begin to be eroded. One would not wish to propose a straightforward equation between a given amount of exposure over 12 months and the same amount of exposure over 18 years, but, when comparisons are made between different categories of language learners, the varying relationship between real time and exposure time does need constantly to be borne in mind. Short-term studies of instructed L2 learning (e.g., Ekstrand 1978) have revealed the same headstart for older beginners as short-term studies of naturalistic L2 learning. Singleton (1989, 1992) has suggested, in the light of the above-noted differences in density of L2 experience, that this initial advantage of older learners, which in naturalistic settings appears to last about a year, may, in the context of vastly sparser exposure to the L2 in classroom settings, last for many years. This alone would readily account for the fact that, within the normal secondary-school cycle, pupils without primary-level L2 instruction appear to catch up with pupils who have received such instruction.

THE "CONSENSUS VIEW" AND THE CRITICAL PERIOD HYPOTHESIS

Krashen, Long and Scarcella (1979) read the evidence on age and L2 learning as follows: while older beginners tend to outperform their juniors - at least in some respects - in the initial stages of learning, in terms of long-term outcomes, generally speaking, the earlier exposure to the target language begins the better. This view of the matter can probably now be characterized as the "consensus view" (see, e.g., Cook 1991; Ellis 1994; Harley 1986; Long 1990). It should be noted that Krashen *et al.* restrict their version of this "younger = better in the long run" position to naturalistic L2 acquisition. Singleton, on the other hand, argues (1989, 1992, forthcoming) that, in the light of the

arguments presented at the end of the last section, the Krashen *et al.* position can be broadened to include the case of formal L2 learning - always on the understanding that long-term benefits of an early start will depend on appropriate articulation between earlier and later learning, on continuing contact with the L2, and on a broadly positive set of classroom experiences of the L2.

This looks like support for the Critical Period Hypothesis (CPH). However, such support needs qualification. First, it is perfectly obvious that the available evidence does not license the simplistic "younger = better in all circumstances over any timescale" version of the CPH that one finds in folk wisdom and that seems to underlie some of the "classic" treatments of age and L2 learning (e.g., Tomb 1925; Stengel 1939; Penfield and Roberts 1959; Lenneberg 1967). Second, even the "younger = better in the long run" version of the CPH in respect of L2 learning must be seen as a general tendency and not as an immutable law. Both research and informal observation suggest that an early start in an L2 is neither a universally sufficient not a strictly necessary condition for the attainment of native-like proficiency. Thus, for example, the literature on early bilingualism shows that the age at which one first encounters an L2 is only one of the determinants of the level of L2 proficiency one reaches (see, e.g., Romaine, 1989: 232-244), and it is noteworthy that even Penfield was prepared to recognize that under some circumstances an individual adult beginner *may* become a "master" of his/her target L2 (Penfield and Roberts, 1959:24).

The capacity of at least some older learners to attain native-like levels of L2 competence, at least in some conditions, is graphically demonstrated in recent studies by Bongaerts, Planken and Schils (forthcoming) and by Ioup (forthcoming). Bongaerts *et al.* address the question of L2 accent acquisition at the end of the critical period as commonly defined (around age twelve). Their findings show that at least for Dutch learners of English such a late start does not preclude the possibility of acquiring a native L2 accent. In discussing their results, Bongaerts *et al.* emphasize the fact that their successful accent-acquirers were university students majoring in English who had received special training in phonetics/phonology besides large amounts of unstructured oral input.

With regard to Ioup's study, this was conducted with two subjects who had learned Arabic as adults in Egypt. The question raised by Ioup is whether input enhancement is essential in order for adults to attain native-like levels of proficiency in their L2. She compares the performance of her two subjects - one entirely untutored in Arabic, the other the recipient of extensive formal instruction - on a range of tasks: - speech production, accent identification, translation, grammaticality judgment and interpretation of anaphora. It transpires that the differences between the two learners are marginal, both attaining levels of performance close to native norms. This prompts Ioup to consider the hypothesis that for those older L2 learners who are able to achieve native-like proficiency formal instruction may not be a prerequisite. However, she treats this hypothesis with caution, observing that her untutored subject in fact engaged in a certain amount of self-tuition and also welcomed and exploited corrective feedback.

CONCLUDING REMARKS

In general, the available evidence suggests that early exposure to an L2 increases one's chances of ultimately attaining high levels of proficiency in the language in question, but that in formal learning situations any long-term advantage conferred by early exposure will be slow to manifest itself and may not manifest itself at all unless articulation between primary and secondary programmes and the learning environment *in toto* are properly managed. The evidence also suggests that at least some L2 learners are able to attain native-like levels of L2 competence without the benefit of an early start, although it seems that if this is to happen L2 input may need to be especially plentiful and may also need particular types of enhancement.

These conclusions do not solve the problem of whether or not L2 instruction at primary level is A Good Thing, but they do imply some questions that curriculum planners should ponder on when considering the matter - questions like the following. What level of competence in terms of fluency, formal accuracy and semantico-pragmatic authenticity is actually going to be required of/useful to the learners in the long term? What are the chances of ensuring that the input that learners will experience are at every stage of learning appropriately focused, appropriately abundant and appropriately enhanced? What degree of

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co-ordination is possible between primary-level and secondary-level language programmes? Interestingly, these are questions that in fact need to be raised irrespective of whether primary-level L2 programmes are at issue. Even the relevance of the last-mentioned transcends the context of early L2 teaching, since language awareness deriving from early mother tongue education also impacts on later L2 learning. In other words, primary-level L2 instruction does not stand outside "normal" L2 teaching and learning concerns, whether as a panacea or a Pandora's Box. On the contrary, whatever decisions are made in relation to early L2 programmes need to be made with the entire language teaching/learning landscape in view and on the basis of broadly the same preoccupations as should be present to the mind when other aspects of language in the curriculum are at stake.

REFERENCES

Bongaerts, T., Planken, B. and Schils, E. (forthcoming). Can late learners attain a native accent in a foreign language? A test of the Critical Period Hypothesis. Singleton and Lengyel (eds).

Breathnach, C. (1993). Temporal determinants of language acquisition and bilingualism. *Irish Journal of Psychological Medicine* 10(1), 41-7.

Burstall, C., Jamieson, M., Cohen, S. and Hargreaves, M. (1974) *Primary French in the Balance*. Windsor: NFER Publishing Company.

C.M.I.E.B./C.L.A./Ville de Besançon (1992). *Actes de la IVe Internationale Langues et Cités. L'enseignement précoce des langues en Europe à l'horizon 2000: bilan et perspectives*. Centre Mondial d'Information sur l'Education Bilingue/Centre de Linguistique Appliquée/Ville de Besançon, Besançon.

Cook, V. (1991). *Second Language Learning and Language Teaching*. Edward Arnold, London.

Ekstrand, L. (1978). English without a book revisited: The effect of age on second language acquisition in a formal setting. *Didakometry* 60, Department of Educational and Psychological Research, School of Education, Malmö. Reprinted in Krashen, Scarcella and Long (eds) (1982), 136-58.

Ellis, R. (1994). *The Study of Second Language Acquisition*. Oxford University Press, Oxford.

Ervin-Tripp, S. (1974). Is second language learning like the first? *TESOL Quarterly* 8, 111-27.

Harley, B. (1986). *Age in Second Language Acquisition*. Multilingual Matters, Clevedon.

Harris, J. (1992). Foreign languages in primary schools: Weighing the evidence *Teangeolas* 30/31, 15-27.

Hyltenstam, K. (1992). Non-native features of near-native speakers: On the attainment of childhood L2 learners. In R. Harris (ed.), *Cognitive processing in bilinguals*: Elsevier, Amsterdam, 351-68.

Ioup, G. (forthcoming). Evaluating the need for input enhancement in post-critical period language acquisition. In Singleton and Lengyel (eds).

Johnstone, R. (1991). Foreign language in primary schools - evaluating the National Pilot Projects in Scotland. *Language Learning Journal* 4, 36-8.

Krashen, S., Long, M. and Scarcella, R. (1979). Age, rate and eventual attainment in second language acquisition. *TESOL Quarterly* 13, 573-82. Reprinted in Krashen, Scarcella and Long (eds) (1982), 161-72.

Krashen, S., Scarcella, R. and Long, M. (eds) (1982). *Child-Adult Differences in Second Language Acquisition*. Rowley, MA: Newbury House.

Lenneberg, E. (1967). *Biological Foundations of Language*. Wiley, New York.

Long, M. (1990). Maturational constraints on language development. *Studies in Second Language Acquisition* 12, 251-85.

McCarthy, J. (1994). The case for language awareness in the Irish primary school. *Language Awareness* 3(1), 1-9.

Morris, B. and Gerstman, L. (1986). Age contrasts in the learning of language relevant materials: Some challenges to critical period hypotheses. *Language Learning* 36, 311-52.

Oller, J. and Nagato, N. (1974). The long-term effect of FLES: an experiment. *Modern Language Journal* 58, 15-19.

Oyama, S. (1976). A sensitive period for the acquisition of a nonnative phonological system. *Journal of Psycholinguistic Research* 5, 261-84.

Oyama, S. (1978). The sensitive period and comprehension of speech. *Working Papers on Bilingualism* 16, 1-17

Penfield, W. and Roberts, L. (1959). *Speech and Brain Mechanisms*. Princeton University Press, Princeton, NJ.

Pincemin, J. and O'Neil, C. (eds.) (1990). *Langues, cultures et systèmes éducatifs: enjeux de la construction de l'Europe*. Arpeij, Lille and Université de Paris III, Paris.

Romaine, S. (1989). *Bilingualism*. Oxford: Blackwell

Singleton, D. (1989). *Language Acquisition: The Age Factor*. Multilingual Matters, Clevedon:.

Singleton, D. (1992). Second language instruction: the when and the how. *AILA Review* 9, 46-54.

Singleton, D. (forthcoming). Introduction: a critical look at the critical period in second language acquisition research. In Singleton and Lengyel (eds) (forthcoming).

Singleton, D. and Lengyel, Z. (eds) (forthcoming). *The Age Factor in Second Language Acquisition: A Critical Look at the Critical Period Hypothesis*. Multilingual Matters, Clevedon.

Snow, C. and Hoefnagel-Höhle, M. (1978). The critical period for language acquisition: evidence from second language learning, *Child Development* 49, 1114-28. Reprinted in Krashen, Scarcella and Long (eds) (1982), 93-111.

Stankowski Gratton, R. (1980). Una ricerca sperimentale sull'insegnamento del tedesco dalla prima classe elementare. *Rassegna Italiana di Linguistica Applicata* 12(3), 119-41.

Stengel, E. (1939). On learning a new language. *International Journal of Psychoanalysis* 20, 471-79.

Stern, H. (1976). Optimal age: Myth or reality? *Canadian Modern Language Review* 32, 283-94.

Titone, R. (1986). Un passaporto per il futuro. *L'Educatore* 34(6), 4-9.

Tomb, J. (1925). On the intuitive capacity of children to understand spoken languages. *British Journal of Psychology* 16, 53-54.

Vilke, M. and Vrhovac (eds) (1993). *Children and Foreign Languages/enfants et les langues étrangères*. Faculty of Philosophy, University of Zagreb.